

Sequence Listing

<110> Baker, Kevin
 Botstein, David
 Eaton, Dan
 Ferrara, Napoleone
 Filvaroff, Ellen
 Gerritsen, Mary
 Goddard, Audrey
 Godowski, Paul
 Grimaldi, Christopher
 Gurney, Austin
 Hillan, Kenneth
 Kljavin, Ivar
 Napier, Mary
 Roy, Margaret
 Tumas, Daniel
 Wood, William

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gtagtacatg gtggataact tctactttta ggaggactac tctcttctga 200

cagtcctaga ctggtcttct acactaagac accatgaagg agtatgtgct 250

cctattattc ctggctttgt gctctgccaa acccttcttt agcccttcac 300

acatcgact gaagaatatg atgctgaagg atatggaaga cacagatgat 350

gatgatgatg atgatgatga tgatgatgat gatgaggaca actctctttt 400

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35 40 45
Asp Asp Asp Asp Asp Glu Asp Asn Ser Leu Phe Pro Thr Arg Glu
50 55 60
Pro Arg Ser His Phe Phe Pro Phe Asp Leu Phe Pro Met Cys Pro
65 70 75
Phe Gly Cys Gln Cys Tyr Ser Arg Val Val His Cys Ser Asp Leu
80 85 90
Gly Leu Thr Ser Val Pro Thr Asn Ile Pro Phe Asp Thr Arg Met
95 100 105
Leu Asp Leu Gln Asn Asn Lys Ile Lys Glu Ile Lys Glu Asn Asp
110 115 120
Phe Lys Gly Leu Thr Ser Leu Tyr Gly Leu Ile Leu Asn Asn Asn
125 130 135
Lys Leu Thr Lys Ile His Pro Lys Ala Phe Leu Thr Thr Lys Lys
140 145 150
Leu Arg Arg Leu Tyr Leu Ser His Asn Gln Leu Ser Glu Ile Pro
155 160 165
Leu Asn Leu Pro Lys Ser Leu Ala Glu Leu Arg Ile His Glu Asn
170 175 180
Lys Val Lys Lys Ile Gln Lys Asp Thr Phe Lys Gly Met Asn Ala
185 190 195
Leu His Val Leu Glu Met Ser Ala Asn Pro Leu Asp Asn Asn Gly
200 205 210

Ile	Glu	Pro	Gly	Ala	Phe	Glu	Gly	Val	Thr	Val	Phe	His	Ile	Arg	215	220	225
Ile	Ala	Glu	Ala	Lys	Leu	Thr	Ser	Val	Pro	Lys	Gly	Leu	Pro	Pro	230	235	240
Thr	Leu	Leu	Glu	Leu	His	Leu	Asp	Tyr	Asn	Lys	Ile	Ser	Thr	Val	245	250	255
Glu	Leu	Glu	Asp	Phe	Lys	Arg	Tyr	Lys	Glu	Leu	Gln	Arg	Leu	Gly	260	265	270
Leu	Gly	Asn	Asn	Lys	Ile	Thr	Asp	Ile	Glu	Asn	Gly	Ser	Leu	Ala	275	280	285
Asn	Ile	Pro	Arg	Val	Arg	Glu	Ile	His	Leu	Glu	Asn	Asn	Lys	Leu	290	295	300
Lys	Lys	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Leu	Lys	Tyr	Leu	Gln	Ile	305	310	315
Ile	Phe	Leu	His	Ser	Asn	Ser	Ile	Ala	Arg	Val	Gly	Val	Asn	Asp	320	325	330
Phe	Cys	Pro	Thr	Val	Pro	Lys	Met	Lys	Lys	Ser	Leu	Tyr	Ser	Ala	335	340	345
Ile	Ser	Leu	Phe	Asn	Asn	Pro	Val	Lys	Tyr	Trp	Glu	Met	Gln	Pro	350	355	360
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 <223> Synthetic Oligonucleotide Probe

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<220>
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35 40 45
Arg Gly Ala Ala Gly Cys Thr Phe Gly Gly Lys Val Tyr Ala Leu
50 55 60
Asp Glu Thr Trp His Pro Asp Leu Gly Gln Pro Phe Gly Val Met
65 70 75

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380	385	390
Leu Arg Ile Ser Gly His Ile Ala Ala	Arg Lys Ser Cys Asp Val	
395	400	405
Leu Gln Ser Val Leu Cys Gly Ala Asp	Ala Leu Ile Pro Val Gln	
410	415	420
Thr Gly Ala Ala Gly Ser Ala Ser Leu	Thr Leu Leu Gly Asn Gly	
425	430	435
Ser Leu Ile Tyr Gln Val Gln Val Val	Gly Thr Ser Ser Glu Val	
440	445	450
Val Ala Met Thr Leu Glu Thr Lys Pro	Gln Arg Arg Asp Gln Arg	
455	460	465
Thr Val Leu Cys His Met Ala Gly Leu	Gln Pro Gly Gly His Thr	
470	475	480
Ala Val Gly Ile Cys Pro Gly Leu Gly	Ala Arg Gly Ala His Met	
485	490	495
Leu Leu Gln Asn Glu Leu Phe Leu Asn	Val Gly Thr Lys Asp Phe	
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Pro Asp Gly Glu Leu Arg Gly His Val	Ala Ala Leu Pro Tyr Cys	
515	520	525
Gly His Ser Ala Arg His Asp Thr Leu	Pro Val Pro Leu Ala Gly	
530	535	540
Ala Leu Val Leu Pro Pro Val Lys Ser	Gln Ala Ala Gly His Ala	
545	550	555
Trp Leu Ser Leu Asp Thr His Cys His	Leu His Tyr Glu Val Leu	
560	565	570
Leu Ala Gly Leu Gly Gly Ser Glu Gln	Gly Thr Val Thr Ala His	
575	580	585
Leu Leu Gly Pro Pro Gly Thr Pro Gly	Pro Arg Arg Leu Leu Lys	
590	595	600
Gly Phe Tyr Gly Ser Glu Ala Gln Gly	Val Val Lys Asp Leu Glu	
605	610	615
Pro Glu Leu Leu Arg His Leu Ala Lys	Gly Met Ala Ser Leu Met	
620	625	630
Ile Thr Thr Lys Gly Ser Pro Arg Gly	Glu Leu Arg Gly Gln Val	
635	640	645
His Ile Ala Asn Gln Cys Glu Val Gly	Gly Leu Arg Leu Glu Ala	
650	655	660

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Ser	Ala	Ala	Pro	Pro	Val	Val	Pro	Gly	Leu	Pro	Ala	Leu	Ala	Pro	680	685	690
Ala	Lys	Pro	Gly	Gly	Pro	Gly	Arg	Pro	Arg	Asp	Pro	Asn	Thr	Cys	695	700	705
Phe	Phe	Glu	Gly	Gln	Gln	Arg	Pro	His	Gly	Ala	Arg	Trp	Ala	Pro	710	715	720
Asn	Tyr	Asp	Pro	Leu	Cys	Ser	Leu	Cys	Thr	Cys	Gln	Arg	Arg	Thr	725	730	735
Val	Ile	Cys	Asp	Pro	Val	Val	Cys	Pro	Pro	Pro	Ser	Cys	Pro	His	740	745	750
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Gln	Asp	Val	Arg	Asp	Leu	Pro	Gly	Leu	Pro	Arg	Ser	Arg	Asp	Pro	770	775	780
Gly	Glu	Gly	Cys	Tyr	Phe	Asp	Gly	Asp	Arg	Ser	Trp	Arg	Ala	Ala	785	790	795
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Cys	Ala	Val	Cys	Thr	Cys	Lys	Gly	Gly	Thr	Gly	Glu	Val	His	Cys	815	820	825
Glu	Lys	Val	Gln	Cys	Pro	Arg	Leu	Ala	Cys	Ala	Gln	Pro	Val	Arg	830	835	840
Val	Asn	Pro	Thr	Asp	Cys	Cys	Lys	Gln	Cys	Pro	Val	Gly	Ser	Gly	845	850	855
Ala	His	Pro	Gln	Leu	Gly	Asp	Pro	Met	Gln	Ala	Asp	Gly	Pro	Arg	860	865	870
Gly	Cys	Arg	Phe	Ala	Gly	Gln	Trp	Phe	Pro	Glu	Ser	Gln	Ser	Trp	875	880	885
His	Pro	Ser	Val	Pro	Pro	Phe	Gly	Glu	Met	Ser	Cys	Ile	Thr	Cys	890	895	900
Arg	Cys	Gly	Ala	Gly	Val	Pro	His	Cys	Glu	Arg	Asp	Asp	Cys	Ser	905	910	915
Leu	Pro	Leu	Ser	Cys	Gly	Ser	Gly	Lys	Glu	Ser	Arg	Cys	Cys	Ser	920	925	930
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<210> 10
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<220>
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<400> 12
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<400> 13
gcaggggtgct caaacaggac ac 22

<210> 14
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gatgccactg cctcactgat tttgctctgg aaggtcacgg ccacaggatt 850
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cttaactctg gtggtgaagg tcagcacctg tgtgccgggg gagagtcacg 1050

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 tcagtagtga gtatttctca tagtgcagct ttatttatct ccaggatgtt 3150
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<210> 15
 <211> 737
 <212> PRT
 <213> Homo Sapien

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 20 25 30
 Ser Ser Leu Ala Asn Pro Val Pro Ala Ala Pro Leu Ser Ala Pro
 35 40 45
 Gly Pro Cys Ala Ala Gln Pro Cys Arg Asn Gly Gly Val Cys Thr
 50 55 60
 Ser Arg Pro Glu Pro Asp Pro Gln His Pro Ala Pro Ala Gly Glu
 65 70 75
 Pro Gly Tyr Ser Cys Thr Cys Pro Ala Gly Ile Ser Gly Ala Asn
 80 85 90
 Cys Gln Leu Val Ala Asp Pro Cys Ala Ser Asn Pro Cys His His
 95 100 105
 Gly Asn Cys Ser Ser Ser Ser Ser Ser Ser Asp Gly Tyr Leu

110									115					120				
Cys	Ile	Cys	Asn	Glu	Gly	Tyr	Glu	Gly	Pro	Asn	Cys	Glu	Gln	Ala				
				125						130						135		
Leu	Pro	Ser	Leu	Pro	Ala	Thr	Gly	Trp	Thr	Glu	Ser	Met	Ala	Pro				
				140						145						150		
Arg	Gln	Leu	Gln	Pro	Val	Pro	Ala	Thr	Gln	Glu	Pro	Asp	Lys	Ile				
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Leu	Pro	Arg	Ser	Gln	Ala	Thr	Val	Thr	Leu	Pro	Thr	Trp	Gln	Pro				
				170						175						180		
Lys	Thr	Gly	Gln	Lys	Val	Val	Glu	Met	Lys	Trp	Asp	Gln	Val	Glu				
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Val	Ile	Pro	Asp	Ile	Ala	Cys	Gly	Asn	Ala	Ser	Ser	Asn	Ser	Ser				
				200						205						210		
Ala	Gly	Gly	Arg	Leu	Val	Ser	Phe	Glu	Val	Pro	Gln	Asn	Thr	Ser				
				215						220						225		
Val	Lys	Ile	Arg	Gln	Asp	Ala	Thr	Ala	Ser	Leu	Ile	Leu	Leu	Trp				
				230						235						240		
Lys	Val	Thr	Ala	Thr	Gly	Phe	Gln	Gln	Cys	Ser	Leu	Ile	Asp	Gly				
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Arg	Ser	Val	Thr	Pro	Leu	Gln	Ala	Ser	Gly	Gly	Leu	Val	Leu	Leu				
				260						265						270		
Glu	Glu	Met	Leu	Ala	Leu	Gly	Asn	Asn	His	Phe	Ile	Gly	Phe	Val				
				275						280						285		
Asn	Asp	Ser	Val	Thr	Lys	Ser	Ile	Val	Ala	Leu	Arg	Leu	Thr	Leu				
				290						295						300		
Val	Val	Lys	Val	Ser	Thr	Cys	Val	Pro	Gly	Glu	Ser	His	Ala	Asn				
				305						310						315		
Asp	Leu	Glu	Cys	Ser	Gly	Lys	Gly	Lys	Cys	Thr	Thr	Lys	Pro	Ser				
				320						325						330		
Glu	Ala	Thr	Phe	Ser	Cys	Thr	Cys	Glu	Glu	Gln	Tyr	Val	Gly	Thr				
				335						340						345		
Phe	Cys	Glu	Glu	Tyr	Asp	Ala	Cys	Gln	Arg	Lys	Pro	Cys	Gln	Asn				
				350						355						360		
Asn	Ala	Ser	Cys	Ile	Asp	Ala	Asn	Glu	Lys	Gln	Asp	Gly	Ser	Asn				
				365						370						375		
Phe	Thr	Cys	Val	Cys	Leu	Pro	Gly	Tyr	Thr	Gly	Glu	Leu	Cys	Gln				
				380						385						390		
Ser	Lys	Ile	Asp	Tyr	Cys	Ile	Leu	Asp	Pro	Cys	Arg	Asn	Gly	Ala				
				395						400						405		

Thr Cys Ile Ser Ser Leu Ser Gly Phe	Thr Cys Gln Cys Pro Glu
410	415 420
Gly Tyr Phe Gly Ser Ala Cys Glu Glu	Lys Val Asp Pro Cys Ala
425	430 435
Ser Ser Pro Cys Gln Asn Asn Gly Thr	Cys Tyr Val Asp Gly Val
440	445 450
His Phe Thr Cys Asn Cys Ser Pro Gly	Phe Thr Gly Pro Thr Cys
455	460 465
Ala Gln Leu Ile Asp Phe Cys Ala Leu	Ser Pro Cys Ala His Gly
470	475 480
Thr Cys Arg Ser Val Gly Thr Ser Tyr	Lys Cys Leu Cys Asp Pro
485	490 495
Gly Tyr His Gly Leu Tyr Cys Glu Glu	Glu Tyr Asn Glu Cys Leu
500	505 510
Ser Ala Pro Cys Leu Asn Ala Ala Thr	Cys Arg Asp Leu Val Asn
515	520 525
Gly Tyr Glu Cys Val Cys Leu Ala Glu	Tyr Lys Gly Thr His Cys
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Glu Leu Tyr Lys Asp Pro Cys Ala Asn	Val Ser Cys Leu Asn Gly
545	550 555
Ala Thr Cys Asp Ser Asp Gly Leu Asn	Gly Thr Cys Ile Cys Ala
560	565 570
Pro Gly Phe Thr Gly Glu Glu Cys Asp	Ile Asp Ile Asn Glu Cys
575	580 585
Asp Ser Asn Pro Cys His His Gly Gly	Ser Cys Leu Asp Gln Pro
590	595 600
Asn Gly Tyr Asn Cys His Cys Pro His	Gly Trp Val Gly Ala Asn
605	610 615
Cys Glu Ile His Leu Gln Trp Lys Ser	Gly His Met Ala Glu Ser
620	625 630
Leu Thr Asn Met Pro Arg His Ser Leu	Tyr Ile Ile Ile Gly Ala
635	640 645
Leu Cys Val Ala Phe Ile Leu Met Leu	Ile Ile Leu Ile Val Gly
650	655 660
Ile Cys Arg Ile Ser Arg Ile Glu Tyr	Gln Gly Ser Ser Arg Pro
665	670 675
Ala Tyr Glu Glu Phe Tyr Asn Cys Arg	Ser Ile Asp Ser Glu Phe
680	685 690
Ser Asn Ala Ile Ala Ser Ile Arg His	Ala Arg Phe Gly Lys Lys

695

700

705

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710 715 720

Tyr Ser Pro Asp Asp Lys Pro Leu Val Thr Leu Ile Lys Thr Lys
725 730 735

Asp Leu

<210> 16

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 16

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<210> 17

<211> 41

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 17

caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 18

<211> 508

<212> DNA

<213> Homo Sapien

<400> 18

ctctggaagg tcacggccac aggattccaa cagtgtctcc tcatagatgg 50

acgaaagtgt gacccccctt tcaggctttc aggggggactg gtcctcctgg 100

aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150

tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaagg 200

cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagggttcag 250

gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttctgtacc 300

tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350

gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400

aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450

ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500

taggggag 508

<210> 19
<211> 508
<212> DNA
<213> Homo Sapien

<400> 19
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acgaaagtgt gacccccctt tcaggctttc agggggactg gtcctcctgg 100
aggagatgct cgccttgggg aataatcact ttattggttt tgtgaatgat 150
tctgtgacta agtctattgt ggctttgcgc ttaactctgg tggagaaggt 200
cagcacctgt gtgccggggg agagtcacgc aaatgacttg gagtggtcag 250
gaaaaggaaa atgcaccacg aagccgtcag aggcaacttt ttcctgtacc 300
tgtgaggagc agtacgtggg tactttctgt gaagaatacg atgcttgcca 350
gaggaaacct tgccaaaaca acgcgagctg tattgatgca aatgaaaagc 400
aagatgggag caatttcacc tgtgtttgcc ttctgggta tactggagag 450
ctttgccaac cgaactgaga ttggagcgaa cgacctacac cgaactgaga 500
taggggag 508

<210> 20
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Oligonucleotide Probe

<400> 20
ctctggaagg tcacggccac agg 23

<210> 21
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 21
ctcagttcgg ttggcaaagc tctc 24

<210> 22
<211> 69
<212> DNA
<213> Artificial Sequence

<220>

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gctttgccaa ccgaactga 69

<210> 23

<211> 1520

<212> DNA

<213> Homo Sapien

<400> 23

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cagcaccag ggcctgcaag agcaggcacg ggcctgatg cgggacttcc 200

cgctcgtgga cggccacaac gacctgcccc tggtcctaag gcaggtttac 250

cagaaagggc tacaggatgt taacctgcgc aatttcagct acggccagac 300

cagcctggac aggcttagag atggcctcgt gggcgcccag ttctggtcag 350

cctatgtgcc atgccagacc caggaccggg atgccctgcg cctcaccctg 400

gagcagattg acctcatacg ccgcatgtgt gcctcctatt ctgagctgga 450

gcttgtgacc tcggctaaag ctctgaacga cactcagaaa ttggcctgcc 500

tcacggtgt agaggggtggc cactcgctgg acaatagcct ctccatctta 550

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caacacaccc tgggcagaga gctccgctaa gggcgccac tcctttctaca 650

acaacatcag cgggctgact gactttggtg agaaggtggt ggcagaaatg 700

aaccgcctgg gcatgatggt agacttatcc catgtctcag atgctgtggc 750

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 tgtggctctg atgaccaggt tagtctgcc agatgtcact gtagcaagcc 1450
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<210> 24
 <211> 433
 <212> PRT
 <213> Homo Sapien

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 Pro Leu Val Asp Gly His Asn Asp Leu Pro Leu Val Leu Arg Gln
 35 40 45
 Val Tyr Gln Lys Gly Leu Gln Asp Val Asn Leu Arg Asn Phe Ser
 50 55 60
 Tyr Gly Gln Thr Ser Leu Asp Arg Leu Arg Asp Gly Leu Val Gly
 65 70 75
 Ala Gln Phe Trp Ser Ala Tyr Val Pro Cys Gln Thr Gln Asp Arg
 80 85 90
 Asp Ala Leu Arg Leu Thr Leu Glu Gln Ile Asp Leu Ile Arg Arg
 95 100 105
 Met Cys Ala Ser Tyr Ser Glu Leu Glu Leu Val Thr Ser Ala Lys
 110 115 120
 Ala Leu Asn Asp Thr Gln Lys Leu Ala Cys Leu Ile Gly Val Glu
 125 130 135
 Gly Gly His Ser Leu Asp Asn Ser Leu Ser Ile Leu Arg Thr Phe
 140 145 150
 Tyr Met Leu Gly Val Arg Tyr Leu Thr Leu Thr His Thr Cys Asn
 155 160 165
 Thr Pro Trp Ala Glu Ser Ser Ala Lys Gly Val His Ser Phe Tyr
 170 175 180

Asn Asn Ile Ser Gly Leu Thr Asp Phe Gly Glu Lys Val Val Ala	185	190	195
Glu Met Asn Arg Leu Gly Met Met Val Asp Leu Ser His Val Ser	200	205	210
Asp Ala Val Ala Arg Arg Ala Leu Glu Val Ser Gln Ala Pro Val	215	220	225
Ile Phe Ser His Ser Ala Ala Arg Gly Val Cys Asn Ser Ala Arg	230	235	240
Asn Val Pro Asp Asp Ile Leu Gln Leu Leu Lys Lys Asn Gly Gly	245	250	255
Val Val Met Val Ser Leu Ser Met Gly Val Ile Gln Cys Asn Pro	260	265	270
Ser Ala Asn Val Ser Thr Val Ala Asp His Phe Asp His Ile Lys	275	280	285
Ala Val Ile Gly Ser Lys Phe Ile Gly Ile Gly Gly Asp Tyr Asp	290	295	300
Gly Ala Gly Lys Phe Pro Gln Gly Leu Glu Asp Val Ser Thr Tyr	305	310	315
Pro Val Leu Ile Glu Glu Leu Leu Ser Arg Gly Trp Ser Glu Glu	320	325	330
Glu Leu Gln Gly Val Leu Arg Gly Asn Leu Leu Arg Val Phe Arg	335	340	345
Gln Val Glu Lys Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu	350	355	360
Glu Asp Lys Phe Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser	365	370	375
Asp Leu Ser Arg Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln	380	385	390
Glu Leu Thr Glu Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala	395	400	405
Lys Trp Ser Val Ser Glu Ser Ser Pro His Met Ala Pro Val Leu	410	415	420
Ala Val Val Ala Thr Phe Pro Val Leu Ile Leu Trp Leu	425	430	

<210> 25

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 25
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<210> 26
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 26
cgtgatgggtg tctttgtcca tggg 24

<210> 27
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 27
ctccaccaat ccgatgaac ttgg 24

<210> 28
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 28
gagcagattg acctcatacg ccgatgtgt gcctcctatt ctgagctgga 50

<210> 29
<211> 1416
<212> DNA
<213> Homo Sapien

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gatccgcggc cgcgaattct aaaccaacat gccgggcacc tacgctccct 100
cgaccacact cagtagtccc agcaccacagg gcctgcaaga gcaggcacgg 150
gccctgatgc gggacttccc gctcgtggac ggccacaacg acctgcccct 200
ggcctaagg caggtttacc agaaagggt acaggatggt aacctgcgca 250
atttcagcta cggccagacc agcctggaca ggcttagaga tggcctcgtg 300
ggcgcccagt tctggtcagc ctatgtgcca tgccagaccc aggaccggga 350
tgccctgcgc ctcaccctgg agcagattga cctcatacgc cgcattgtgtg 400

cttcctattc tgagctggag cttgtgacct cggctaaga cttcgaacgac 450
actcagaaat tggcctgcct catcggtgta gaggggtggcc actcgcctgga 500
caatagcctc tccatcttac gtaccttcta catgctggga gtgcgctacc 550
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gttcacgagg attggtggag attatgatgg ggccggcaaa ttccctcagg 1000
ggctggaaga cgtgtccaca taccgggtcc tgatagagga gttgctgagt 1050
cgtggctgga gtgaggaaga gcttcaggggt gtccttcgtg gaaacctgct 1100
gcgggtcttc agacaagtgg aaaaggtaca ggaagaaaac aaatggcaaa 1150
gccccttgga ggacaagttc ccggatgagc agctgagcag ttcttgccac 1200
tccgacctct cactgtgcg tcagagacag agtctgactt caggccagga 1250
actactgag attcccatc actggacagc caagttacca gccaaagtgg 1300
cagtctcaga gtctccccc caccctgaca aaactcacac atgcccaccg 1350
tgcccagcac ctgaactcct gggggggaccg tcagtcttcc tcttcccccc 1400
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<210> 30
<211> 446
<212> PRT
<213> Homo Sapien
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Asp	Ala	Leu	Arg	Leu 95	Thr	Leu	Glu	Gln	Ile 100	Asp	Leu	Ile	Arg	Arg 105
Met	Cys	Ala	Ser	Tyr 110	Ser	Glu	Leu	Glu	Leu 115	Val	Thr	Ser	Ala	Lys 120
Ala	Leu	Asn	Asp	Thr 125	Gln	Lys	Leu	Ala	Cys 130	Leu	Ile	Gly	Val	Glu 135
Gly	Gly	His	Ser	Leu 140	Asp	Asn	Ser	Leu	Ser 145	Ile	Leu	Arg	Thr	Phe 150
Tyr	Met	Leu	Gly	Val 155	Arg	Tyr	Leu	Thr	Leu 160	Thr	His	Thr	Cys	Asn 165
Thr	Pro	Trp	Ala	Glu 170	Ser	Ser	Ala	Lys	Gly 175	Val	His	Ser	Phe	Tyr 180
Asn	Asn	Ile	Ser	Gly 185	Leu	Thr	Asp	Phe	Gly 190	Glu	Lys	Val	Val	Ala 195
Glu	Met	Asn	Arg	Leu 200	Gly	Met	Met	Val	Asp 205	Leu	Ser	His	Val	Ser 210
Asp	Ala	Val	Ala	Arg 215	Arg	Ala	Leu	Glu	Val 220	Ser	Gln	Ala	Pro	Val 225
Ile	Phe	Ser	His	Ser 230	Ala	Ala	Arg	Gly	Val 235	Cys	Asn	Ser	Ala	Arg 240
Asn	Val	Pro	Asp	Asp 245	Ile	Leu	Gln	Leu	Leu 250	Lys	Lys	Asn	Gly	Gly 255
Val	Val	Met	Val	Ser 260	Leu	Ser	Met	Gly	Val 265	Ile	Gln	Cys	Asn	Pro 270
Ser	Ala	Asn	Val	Ser 275	Thr	Val	Ala	Asp	His 280	Phe	Asp	His	Ile	Lys 285
Ala	Val	Ile	Gly	Ser 290	Lys	Phe	Ile	Gly	Ile 295	Gly	Gly	Asp	Tyr	Asp 300
Gly	Ala	Gly	Lys	Phe 305	Pro	Gln	Gly	Leu	Glu 310	Asp	Val	Ser	Thr	Tyr 315
Pro	Val	Leu	Ile	Glu 320	Glu	Leu	Leu	Ser	Arg 325	Gly	Trp	Ser	Glu	Glu 330
Glu	Leu	Gln	Gly	Val 335	Leu	Arg	Gly	Asn	Leu 340	Leu	Arg	Val	Phe	Arg 345

Gln Val Glu Lys	Val Gln Glu Glu Asn Lys Trp Gln Ser Pro Leu	
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Glu Asp Lys Phe	Pro Asp Glu Gln Leu Ser Ser Ser Cys His Ser	
365	370	375
Asp Leu Ser Arg	Leu Arg Gln Arg Gln Ser Leu Thr Ser Gly Gln	
380	385	390
Glu Leu Thr Glu	Ile Pro Ile His Trp Thr Ala Lys Leu Pro Ala	
395	400	405
Lys Trp Ser Val	Ser Glu Ser Ser Pro His Pro Asp Lys Thr His	
410	415	420
Thr Cys Pro Pro	Cys Pro Ala Pro Glu Leu Leu Gly Gly Pro Ser	
425	430	435
Val Phe Leu Phe	Pro Pro Lys Pro Lys Asp Thr	
440	445	

<210> 31
 <211> 1790
 <212> DNA
 <213> Homo Sapien

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 atccgcgcgg cggcgcgcgc cgttgctgcc cctgctgctg ctgctctgcg 200
 tcttcggggc gccgcgagcc ggatcaggag cccacacagc tgtgatcagt 250
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 agtgcacgga gaccaccag gagccaccgc cgagggcctc tactggacc 350
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 gcctctatgt tggcctgccc ccagagaaac ccgtcaacat cagctgctgg 550
 tccaagaaca tgaaggactt gacctgccgc tggacgccag gggcccacgg 600
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 atggccagga caacacatgt gaggagtacc acacagtggg gcccactcc 700
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[illegible]

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Pro  Pro  Pro  Leu  Leu  Pro  Leu  Leu  Leu  Leu  Leu  Cys  Val  Leu  Gly
   20                                25                      30

Ala  Pro  Arg  Ala  Gly  Ser  Gly  Ala  His  Thr  Ala  Val  Ile  Ser  Pro
   35                                40                      45

Gln  Asp  Pro  Thr  Leu  Leu  Ile  Gly  Ser  Ser  Leu  Leu  Ala  Thr  Cys
   50                                55                      60

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Ser Val His Gly Asp Pro Pro Gly Ala Thr Ala Glu Gly Leu Tyr	65	70	75
Trp Thr Leu Asn Gly Arg Arg Leu Pro Pro Glu Leu Ser Arg Val	80	85	90
Leu Asn Ala Ser Thr Leu Ala Leu Ala Leu Ala Asn Leu Asn Gly	95	100	105
Ser Arg Gln Arg Ser Gly Asp Asn Leu Val Cys His Ala Arg Asp	110	115	120
Gly Ser Ile Leu Ala Gly Ser Cys Leu Tyr Val Gly Leu Pro Pro	125	130	135
Glu Lys Pro Val Asn Ile Ser Cys Trp Ser Lys Asn Met Lys Asp	140	145	150
Leu Thr Cys Arg Trp Thr Pro Gly Ala His Gly Glu Thr Phe Leu	155	160	165
His Thr Asn Tyr Ser Leu Lys Tyr Lys Leu Arg Trp Tyr Gly Gln	170	175	180
Asp Asn Thr Cys Glu Glu Tyr His Thr Val Gly Pro His Ser Cys	185	190	195
His Ile Pro Lys Asp Leu Ala Leu Phe Thr Pro Tyr Glu Ile Trp	200	205	210
Val Glu Ala Thr Asn Arg Leu Gly Ser Ala Arg Ser Asp Val Leu	215	220	225
Thr Leu Asp Ile Leu Asp Val Val Thr Thr Asp Pro Pro Pro Asp	230	235	240
Val His Val Ser Arg Val Gly Gly Leu Glu Asp Gln Leu Ser Val	245	250	255
Arg Trp Val Ser Pro Pro Ala Leu Lys Asp Phe Leu Phe Gln Ala	260	265	270
Lys Tyr Gln Ile Arg Tyr Arg Val Glu Asp Ser Val Asp Trp Lys	275	280	285
Val Val Asp Asp Val Ser Asn Gln Thr Ser Cys Arg Leu Ala Gly	290	295	300
Leu Lys Pro Gly Thr Val Tyr Phe Val Gln Val Arg Cys Asn Pro	305	310	315
Phe Gly Ile Tyr Gly Ser Lys Lys Ala Gly Ile Trp Ser Glu Trp	320	325	330
Ser His Pro Thr Ala Ala Ser Thr Pro Arg Ser Glu Arg Pro Gly	335	340	345
Pro Gly Gly Gly Ala Cys Glu Pro Arg Gly Gly Glu Pro Ser Ser			

350	355	360
Gly Pro Val Arg	Arg Glu Leu Lys Gln Phe Leu Gly Trp Leu Lys	
365	370	375
Lys His Ala Tyr	Cys Ser Asn Leu Ser Phe Arg Leu Tyr Asp Gln	
380	385	390
Trp Arg Ala Trp	Met Gln Lys Ser His Lys Thr Arg Asn Gln Asp	
395	400	405
Glu Gly Ile Leu	Pro Ser Gly Arg Arg Gly Thr Ala Arg Gly Pro	
410	415	420
Ala Arg		

<210> 33
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 33
 cccgcccgcac gtgcacgtga gcc 23

<210> 34
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 34
 tgagccagcc caggaactgc ttg 23

<210> 35
 <211> 50
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 35
 caagtgcgct gcaaccctt tggcatctat ggctccaaga aagccgggat 50

<210> 36
 <211> 1771
 <212> DNA
 <213> Homo Sapien

<400> 36
 cccacgcgtc cgctggtggt agatcgagca accctctaaa agcagtttag 50

gccactctgt ttctgagag atacctcaca ttccaatgcc aaacatttct 1550
gcacagggaa gctagagggtg gatacacgtg ttgcaagtat aaaagcatca 1600
ctgggattta aggagaattg agagaatgta cccacaaatg gcagcaataa 1650
taaattggatc acacttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1700
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1750
aaaaaaaaaa aaaaaaaaaa a 1771

<210> 37
<211> 300
<212> PRT
<213> Homo Sapien

<400> 37
Met Lys Phe Leu Leu Asp Ile Leu Leu Leu Leu Pro Leu Leu Ile
1 5 10 15
Val Cys Ser Leu Glu Ser Phe Val Lys Leu Phe Ile Pro Lys Arg
20 25 30
Arg Lys Ser Val Thr Gly Glu Ile Val Leu Ile Thr Gly Ala Gly
35 40 45
His Gly Ile Gly Arg Leu Thr Ala Tyr Glu Phe Ala Lys Leu Lys
50 55 60
Ser Lys Leu Val Leu Trp Asp Ile Asn Lys His Gly Leu Glu Glu
65 70 75
Thr Ala Ala Lys Cys Lys Gly Leu Gly Ala Lys Val His Thr Phe
80 85 90
Val Val Asp Cys Ser Asn Arg Glu Asp Ile Tyr Ser Ser Ala Lys
95 100 105
Lys Val Lys Ala Glu Ile Gly Asp Val Ser Ile Leu Val Asn Asn
110 115 120
Ala Gly Val Val Tyr Thr Ser Asp Leu Phe Ala Thr Gln Asp Pro
125 130 135
Gln Ile Glu Lys Thr Phe Glu Val Asn Val Leu Ala His Phe Trp
140 145 150
Thr Thr Lys Ala Phe Leu Pro Ala Met Thr Lys Asn Asn His Gly
155 160 165
His Ile Val Thr Val Ala Ser Ala Ala Gly His Val Ser Val Pro
170 175 180
Phe Leu Leu Ala Tyr Cys Ser Ser Lys Phe Ala Ala Val Gly Phe
185 190 195
His Lys Thr Leu Thr Asp Glu Leu Ala Ala Leu Gln Ile Thr Gly

200	205	210
Val Lys Thr Thr Cys Leu Cys Pro Asn Phe	Val Asn Thr Gly Phe	
215	220	225
Ile Lys Asn Pro Ser Thr Ser Leu Gly	Pro Thr Leu Glu Pro Glu	
230	235	240
Glu Val Val Asn Arg Leu Met His Gly	Ile Leu Thr Glu Gln Lys	
245	250	255
Met Ile Phe Ile Pro Ser Ser Ile Ala	Phe Leu Thr Thr Leu Glu	
260	265	270
Arg Ile Leu Pro Glu Arg Phe Leu Ala	Val Leu Lys Arg Lys Ile	
275	280	285
Ser Val Lys Phe Asp Ala Val Ile Gly	Tyr Lys Met Lys Ala Gln	
290	295	300

<210> 38
 <211> 23
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 38
 ggtgaaggca gaaattggag atg 23

<210> 39
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 39
 atcccatgca tcagcctgtt tacc 24

<210> 40
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 40
 gctggtgtag tctatacatc agatttggtt gctacacaag atcctcag 48

<210> 41
 <211> 1377
 <212> DNA
 <213> Homo Sapien

<400> 41

gactagttct cttggagtct gggaggagga aagcggagcc ggcagggagc 50
gaaccaggac tggggtgacg gcagggcagg gggcgcttg cgggggagaa 100
gcgcgggggc tggagcacca ccaactggag ggtccggagt agcgagcgcc 150
ccgaaggagg ccatcgggga gccgggaggg gggactgca gaggaccccg 200
gcgtccgggc tcccgggtgcc agcgctatga ggcactcct cgtcctgctg 250
ctcctgggccc tggcgggccg ctcgccccca ctggacgaca acaagatccc 300
cagcctctgc cgggggcacc cgggccttcc aggcacgccg ggccaccatg 350
gcagccaggg cttgccgggc cgcgatggcc gcgacggccg cgacggcgcg 400
cccggggctc cgggagagaa aggcgagggc gggaggccgg gactgccggg 450
acctcgaggg gaccccgggc cgcgaggaga ggcgggaccc gcggggccca 500
ccgggcctgc cggggagtgc tcggtgcctc cgcgatccgc cttcagcgcc 550
aagcgctccg agagccgggt gcctccgccg tctgacgcac ccttgccctt 600
cgaccgcgtg ctggtgaacg agcagggaca ttacgacgcc gtcaccggca 650
agttcacctg ccagggtgct ggggtctact acttcgcgt ccattgccacc 700
gtctaccggg ccagcctgca gtttgatctg gtgaagaatg gcgaatccat 750
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cggggggggc catggtgagg ctggagcctg aggaccaagt gtgggtgcag 850
gtgggtgtgg gtgactacat tggcatctat gccagcatca agacagacag 900
caccttctcc ggatttctgg tgtactccga ctggcacagc tccccagtct 950
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ggcaaggaat gggaacagtg gctgtctgcg atcaggtctg gcagcatggg 1150
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aaaaaaaaa aaaaaaaaaa aaaaaaa 1377

<210> 42

<211> 243
 <212> PRT
 <213> Homo Sapien

<400> 42

Met	Arg	Pro	Leu	Leu	Val	Leu	Leu	Leu	Leu	Gly	Leu	Ala	Ala	Gly	1	5	10	15
Ser	Pro	Pro	Leu	Asp	Asp	Asn	Lys	Ile	Pro	Ser	Leu	Cys	Pro	Gly	20	25	30	
His	Pro	Gly	Leu	Pro	Gly	Thr	Pro	Gly	His	His	Gly	Ser	Gln	Gly	35	40	45	
Leu	Pro	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Arg	Asp	Gly	Ala	Pro	Gly	50	55	60	
Ala	Pro	Gly	Glu	Lys	Gly	Glu	Gly	Gly	Arg	Pro	Gly	Leu	Pro	Gly	65	70	75	
Pro	Arg	Gly	Asp	Pro	Gly	Pro	Arg	Gly	Glu	Ala	Gly	Pro	Ala	Gly	80	85	90	
Pro	Thr	Gly	Pro	Ala	Gly	Glu	Cys	Ser	Val	Pro	Pro	Arg	Ser	Ala	95	100	105	
Phe	Ser	Ala	Lys	Arg	Ser	Glu	Ser	Arg	Val	Pro	Pro	Pro	Ser	Asp	110	115	120	
Ala	Pro	Leu	Pro	Phe	Asp	Arg	Val	Leu	Val	Asn	Glu	Gln	Gly	His	125	130	135	
Tyr	Asp	Ala	Val	Thr	Gly	Lys	Phe	Thr	Cys	Gln	Val	Pro	Gly	Val	140	145	150	
Tyr	Tyr	Phe	Ala	Val	His	Ala	Thr	Val	Tyr	Arg	Ala	Ser	Leu	Gln	155	160	165	
Phe	Asp	Leu	Val	Lys	Asn	Gly	Glu	Ser	Ile	Ala	Ser	Phe	Phe	Gln	170	175	180	
Phe	Phe	Gly	Gly	Trp	Pro	Lys	Pro	Ala	Ser	Leu	Ser	Gly	Gly	Ala	185	190	195	
Met	Val	Arg	Leu	Glu	Pro	Glu	Asp	Gln	Val	Trp	Val	Gln	Val	Gly	200	205	210	
Val	Gly	Asp	Tyr	Ile	Gly	Ile	Tyr	Ala	Ser	Ile	Lys	Thr	Asp	Ser	215	220	225	
Thr	Phe	Ser	Gly	Phe	Leu	Val	Tyr	Ser	Asp	Trp	His	Ser	Ser	Pro	230	235	240	
Val	Phe	Ala																

<210> 43
 <211> 24

<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 43
tacaggccca gtcaggacca gggg 24

<210> 44
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 44
agccagcctc gctctcgg 18

<210> 45
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 45
gtctgcatc aggtctgg 18

<210> 46
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 46
gaaagaggca atggattcgc 20

<210> 47
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 47
gacttacact tgccagcaca gcac 24

<210> 48
<211> 45
<212> DNA
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 48

ggagcaccac caactggagg gtccggagta gcgagcgccc cgaag 45

<210> 49

<211> 1876

<212> DNA

<213> Homo Sapien

<400> 49

ctcttttgtc caccagccca gcctgactcc tggagattgt gaatagctcc 50
atccagcctg agaaacaagc cgggtggctg agccaggctg tgcacggagc 100
acctgacggg cccaacagac ccatgctgca tccagagacc tcccctggcc 150
gggggcatct cctggctgtg ctccctggccc tccttggcac cacctgggca 200
gaggtgtggc caccacagct gcaggagcag gctccgatgg ccggagccct 250
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tgcagctgct gcccgcgggc ttggcgctct ttgttgaagt ggtcagccta 500
tggtttgcag aggggcagcg gtacagccac gcggcaggag agtgtgctcg 550
caacgccacc tgcaccact acacgcagct cgtgtgggcc acctcaagcc 600
agctgggctg tgggcggcac ctgtgctctg caggccagac agcgatagaa 650
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gacaatcatc ccctataaga aggggtgctg gtgttcgctc tgcacagcca 750
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gagtgtcgt gcgtctgtga catcggtac gggggagccc agtgtgccac 1000
caaggtgcat tttcccttcc acacctgtga cctgaggatc gacggagact 1050
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tgtcagagga aaggcggggg gctggcccag atcaagagcc agaaagtgc 1150

ggacatcttc gccttctatc tgggccgcct ggagaccacc aacgaggtga 1200
 ctgacagtga cttcgagacc aggaacttct ggatcgggct cacctacaag 1250
 accgccaagg actccttccg ctgggccaca ggggagcacc aggccttcac 1300
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 tgcccaggag cacatctccc ggtggggccc agggctctga ggctgacca 1500
 catggctccc tcgctgccc tgggagcacc ggctctgctt acctgtctgc 1550
 ccacctgtct ggaacaaggg ccagggttaag accacatgcc tcatgtccaa 1600
 agaggtctca gaccttgac aatgccagaa gttgggcaga gagaggcagg 1650
 gaggccagtg agggccaggg agtgagtgtt agaagaagct ggggcccttc 1700
 gcctgctttt gattgggaag atgggcttca attagatggc gaaggagagg 1750
 acaccgccag tgggtccaaa aggctgctct cttccacctg gccagaccc 1800
 tgtggggcag cggagcttcc ctgtggcatg aacccacagg ggtattaaat 1850
 tatgaatcag ctgaaaaaaaa aaaaaa 1876

<210> 50
 <211> 455
 <212> PRT
 <213> Homo Sapien

<400> 50
 Met Leu His Pro Glu Thr Ser Pro Gly Arg Gly His Leu Leu Ala
 1 5 10 15
 Val Leu Leu Ala Leu Leu Gly Thr Thr Trp Ala Glu Val Trp Pro
 20 25 30
 Pro Gln Leu Gln Glu Gln Ala Pro Met Ala Gly Ala Leu Asn Arg
 35 40 45
 Lys Glu Ser Phe Leu Leu Leu Ser Leu His Asn Arg Leu Arg Ser
 50 55 60
 Trp Val Gln Pro Pro Ala Ala Asp Met Arg Arg Leu Asp Trp Ser
 65 70 75
 Asp Ser Leu Ala Gln Leu Ala Gln Ala Arg Ala Ala Leu Cys Gly
 80 85 90
 Ile Pro Thr Pro Ser Leu Ala Ser Gly Leu Trp Arg Thr Leu Gln
 95 100 105
 Val Gly Trp Asn Met Gln Leu Leu Pro Ala Gly Leu Ala Ser Phe

110										115					120				
Val	Glu	Val	Val	Ser	Leu	Trp	Phe	Ala		Glu	Gly	Gln	Arg	Tyr	Ser				
				125										130					135
His	Ala	Ala	Gly	Glu	Cys	Ala	Arg	Asn		Ala	Thr	Cys	Thr	His	Tyr				
				140										145					150
Thr	Gln	Leu	Val	Trp	Ala	Thr	Ser	Ser		Gln	Leu	Gly	Cys	Gly	Arg				
				155										160					165
His	Leu	Cys	Ser	Ala	Gly	Gln	Thr	Ala		Ile	Glu	Ala	Phe	Val	Cys				
				170										175					180
Ala	Tyr	Ser	Pro	Gly	Gly	Asn	Trp	Glu		Val	Asn	Gly	Lys	Thr	Ile				
				185										190					195
Ile	Pro	Tyr	Lys	Lys	Gly	Ala	Trp	Cys		Ser	Leu	Cys	Thr	Ala	Ser				
				200										205					210
Val	Ser	Gly	Cys	Phe	Lys	Ala	Trp	Asp		His	Ala	Gly	Gly	Leu	Cys				
				215										220					225
Glu	Val	Pro	Arg	Asn	Pro	Cys	Arg	Met		Ser	Cys	Gln	Asn	His	Gly				
				230										235					240
Arg	Leu	Asn	Ile	Ser	Thr	Cys	His	Cys		His	Cys	Pro	Pro	Gly	Tyr				
				245										250					255
Thr	Gly	Arg	Tyr	Cys	Gln	Val	Arg	Cys		Ser	Leu	Gln	Cys	Val	His				
				260										265					270
Gly	Arg	Phe	Arg	Glu	Glu	Glu	Cys	Ser		Cys	Val	Cys	Asp	Ile	Gly				
				275										280					285
Tyr	Gly	Gly	Ala	Gln	Cys	Ala	Thr	Lys		Val	His	Phe	Pro	Phe	His				
				290										295					300
Thr	Cys	Asp	Leu	Arg	Ile	Asp	Gly	Asp		Cys	Phe	Met	Val	Ser	Ser				
				305										310					315
Glu	Ala	Asp	Thr	Tyr	Tyr	Arg	Ala	Arg		Met	Lys	Cys	Gln	Arg	Lys				
				320										325					330
Gly	Gly	Val	Leu	Ala	Gln	Ile	Lys	Ser		Gln	Lys	Val	Gln	Asp	Ile				
				335										340					345
Leu	Ala	Phe	Tyr	Leu	Gly	Arg	Leu	Glu		Thr	Thr	Asn	Glu	Val	Thr				
				350										355					360
Asp	Ser	Asp	Phe	Glu	Thr	Arg	Asn	Phe		Trp	Ile	Gly	Leu	Thr	Tyr				
				365										370					375
Lys	Thr	Ala	Lys	Asp	Ser	Phe	Arg	Trp		Ala	Thr	Gly	Glu	His	Gln				
				380										385					390
Ala	Phe	Thr	Ser	Phe	Ala	Phe	Gly	Gln		Pro	Asp	Asn	His	Gly	Leu				
				395										400					405

Val Trp Leu Ser Ala Ala Met Gly Phe Gly Asn Cys Val Glu Leu
410 415 420

Gln Ala Ser Ala Ala Phe Asn Trp Asn Asp Gln Arg Cys Lys Thr
425 430 435

Arg Asn Arg Tyr Ile Cys Gln Phe Ala Gln Glu His Ile Ser Arg
440 445 450

Trp Gly Pro Gly Ser
455

<210> 51
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 51
aggaacttct ggatcgggct cacc 24

<210> 52
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 52
gggtctgggc caggtggaag agag 24

<210> 53
<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 53
gccaaaggact ccttccgctg ggccacaggg gagcaccagg ccttc 45

<210> 54
<211> 2331
<212> DNA
<213> Homo Sapien

<400> 54
cggacgcgtg ggctggggcgc tgcaaagcgt gtcccgccgg gtccccgagc 50
gtcccgcgcc ctgccccgc catgctcctg ctgctggggc tgtgcctggg 100
gctgtccctg tgtgtggggc cgcaggaaga ggcgagagc tggggccact 150
cttcggagca ggatggactc aggggtcccga ggcaagtcag actgttgcag 200

acgtggaggt caccgccagc aacagtaaga aattcatcat cctgaagaca 1700
gatgtgcttg tgcggcctca gaaggcaggg aaagatgtca caggaagccc 1750
caggcctgga ggcgatggag agggggacac caaccacatc gagcgtctct 1800
ggagctacct caccacaaag gagctgctga gctcctggct gcaaagtga 1850
gatgaaccgg agaaggagcg gctgcggcag cgggccagg cctgggctgt 1900
gagctaccgc ttctcactc ccttcacctc catgaagctg agggggccgg 1950
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ggacccgaac cggtggtgca gagcgtgca ggagctggca cgcagccagg 2050
acctttgtc aagaagccaa actccgtcaa aaaaaaaca aacaaaaca 2100
aaaaagaca tgggagagat ggtgttttct ctctccacca cctggggata 2150
cgatgagaag atggccacct gcaagccagg aagacggccc tcaccagaca 2200
ccatgtctgc tggcaccttg atcttggacc tccagcctc cagaactgtg 2250
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<210> 55
<211> 694
<212> PRT
<213> Homo Sapien

<400> 55
Met Leu Leu Leu Leu Gly Leu Cys Leu Gly Leu Ser Leu Cys Val
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Gly Ser Gln Glu Glu Ala Gln Ser Trp Gly His Ser Ser Glu Gln
20 25 30
Asp Gly Leu Arg Val Pro Arg Gln Val Arg Leu Leu Gln Arg Leu
35 40 45
Lys Thr Lys Pro Leu Met Thr Glu Phe Ser Val Lys Ser Thr Ile
50 55 60
Ile Ser Arg Tyr Ala Phe Thr Thr Val Ser Cys Arg Met Leu Asn
65 70 75
Arg Ala Ser Glu Asp Gln Asp Ile Glu Phe Gln Met Gln Ile Pro
80 85 90
Ala Ala Ala Phe Ile Thr Asn Phe Thr Met Leu Ile Gly Asp Lys
95 100 105
Val Tyr Gln Gly Glu Ile Thr Glu Arg Glu Lys Lys Ser Gly Asp
110 115 120

<210> 56
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 56
gtgggaacca aactccggca gacc 24

<210> 57
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 57
cacatcgagc gtctctgg 18

<210> 58
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 58
agccgctcct tctccggttc atcg 24

<210> 59
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 59
tggaaggacc acttgatata agtcactcca gacagcatca gggatggg 48

<210> 60
<211> 1413
<212> DNA
<213> Homo Sapien

<400> 60
cgacgcgtg ggggccccga catggcgagt gtagtgctgc cgagcggatc 50
ccagtgtgcg gcggcagcgg cggcggcggc gcctcccggg ctccggcttc 100
tgctgttgct cttctccgcc gcggcactga tccccacagg tgatgggcag 150
aatctgttta cgaaagacgt gacagtgatc gagggagagg ttgcgaccat 200

305	310	315
Ile Val Gly Lys	Ala His Ser Asp Tyr Met Leu Tyr Val Tyr Asp	
320	325	330
Pro Pro Thr Thr	Ile Pro Pro Pro Thr Thr Thr Thr Thr Thr Thr	
335	340	345
Thr Thr Thr Thr	Thr Thr Ile Leu Thr Ile Ile Thr Asp Ser Arg	
350	355	360
Ala Gly Glu Glu	Gly Ser Ile Arg Ala Val Asp His Ala Val Ile	
365	370	375
Gly Gly Val Val	Ala Val Val Val Phe Ala Met Leu Cys Leu Leu	
380	385	390
Ile Ile Leu Gly	Arg Tyr Phe Ala Arg His Lys Gly Thr Tyr Phe	
395	400	405
Thr His Glu Ala	Lys Gly Ala Asp Asp Ala Ala Asp Ala Asp Thr	
410	415	420
Ala Ile Ile Asn	Ala Glu Gly Gly Gln Asn Asn Ser Glu Glu Lys	
425	430	435
Lys Glu Tyr Phe	Ile	
440		

<210> 62
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 62
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 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 63
 gtacactgtg accagtcagc 20

<210> 64
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 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 64
atcatcacag attccccgagc 20

<210> 65
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<212> DNA
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<220>
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<400> 65
ttcaatctcc tcaccttcca ccgc 24

<210> 66
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<212> DNA
<213> Artificial Sequence

<220>
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<400> 66
atagctgtgt ctgcgtctgc tgcg 24

<210> 67
<211> 50
<212> DNA
<213> Artificial Sequence

<220>
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<400> 67
cgcggcactg atccccacag gtgatgggca gaatctgttt acgaaagacg 50

<210> 68
<211> 2555
<212> DNA
<213> Homo Sapien

<400> 68
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ccctctgctg ctgccgctgc tctgctact ggccctgggg cctgggggtgc 200
agggtgccc atccggtgc cagtgcagcc agccacagac agtcttctgc 250
actgcccgcc aggggaccac ggtgccccga gacgtgccac ccgacacggt 300
ggggctgtac gtctttgaga acggcatcac catgctcgac gcaagcagct 350
ttgccggcct gccgggcctg cagctcctgg acctgtcaca gaaccagatc 400

gccagcctgc gcctgccccg cctgctgctg ctggacctca gccacaacag 450
 cctcctggcc ctggagcccc gcatcctgga cactgccaac gtggaggcgc 500
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 cttggagcca ggcccgagg caacagagg cggtggagag gccctgcca 1850

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Ala	Leu	Arg	Leu	Ala 125	Gly	Leu	Gly	Leu	Gln 130	Gln	Leu	Asp	Glu	Gly 135
Leu	Phe	Ser	Arg	Leu 140	Arg	Asn	Leu	His	Asp 145	Leu	Asp	Val	Ser	Asp 150
Asn	Gln	Leu	Glu	Arg 155	Val	Pro	Pro	Val	Ile 160	Arg	Gly	Leu	Arg	Gly 165
Leu	Thr	Arg	Leu	Arg 170	Leu	Ala	Gly	Asn	Thr 175	Arg	Ile	Ala	Gln	Leu 180
Arg	Pro	Glu	Asp	Leu 185	Ala	Gly	Leu	Ala	Ala 190	Leu	Gln	Glu	Leu	Asp 195
Val	Ser	Asn	Leu	Ser 200	Leu	Gln	Ala	Leu	Pro 205	Gly	Asp	Leu	Ser	Gly 210
Leu	Phe	Pro	Arg	Leu 215	Arg	Leu	Leu	Ala	Ala 220	Ala	Arg	Asn	Pro	Phe 225
Asn	Cys	Val	Cys	Pro 230	Leu	Ser	Trp	Phe	Gly 235	Pro	Trp	Val	Arg	Glu 240
Ser	His	Val	Thr	Leu 245	Ala	Ser	Pro	Glu	Glu 250	Thr	Arg	Cys	His	Phe 255
Pro	Pro	Lys	Asn	Ala 260	Gly	Arg	Leu	Leu	Leu 265	Glu	Leu	Asp	Tyr	Ala 270
Asp	Phe	Gly	Cys	Pro 275	Ala	Thr	Thr	Thr	Thr 280	Ala	Thr	Val	Pro	Thr 285
Thr	Arg	Pro	Val	Val 290	Arg	Glu	Pro	Thr	Ala 295	Leu	Ser	Ser	Ser	Leu 300
Ala	Pro	Thr	Trp	Leu 305	Ser	Pro	Thr	Ala	Pro 310	Ala	Thr	Glu	Ala	Pro 315
Ser	Pro	Pro	Ser	Thr 320	Ala	Pro	Pro	Thr	Val 325	Gly	Pro	Val	Pro	Gln 330
Pro	Gln	Asp	Cys	Pro 335	Pro	Ser	Thr	Cys	Leu 340	Asn	Gly	Gly	Thr	Cys 345
His	Leu	Gly	Thr	Arg 350	His	His	Leu	Ala	Cys 355	Leu	Cys	Pro	Glu	Gly 360
Phe	Thr	Gly	Leu	Tyr 365	Cys	Glu	Ser	Gln	Met 370	Gly	Gln	Gly	Thr	Arg 375
Pro	Ser	Pro	Thr	Pro 380	Val	Thr	Pro	Arg	Pro 385	Pro	Arg	Ser	Leu	Thr 390
Leu	Gly	Ile	Glu	Pro 395	Val	Ser	Pro	Thr	Ser 400	Leu	Arg	Val	Gly	Leu 405

Gln Arg Tyr Leu	Gln Gly Ser Ser Val	Gln Leu Arg Ser Leu Arg	410	415	420
Leu Thr Tyr Arg	Asn Leu Ser Gly Pro	Asp Lys Arg Leu Val Thr	425	430	435
Leu Arg Leu Pro	Ala Ser Leu Ala Glu	Tyr Thr Val Thr Gln Leu	440	445	450
Arg Pro Asn Ala	Thr Tyr Ser Val Cys	Val Met Pro Leu Gly Pro	455	460	465
Gly Arg Val Pro	Glu Gly Glu Glu Ala	Cys Gly Glu Ala His Thr	470	475	480
Pro Pro Ala Val	His Ser Asn His Ala	Pro Val Thr Gln Ala Arg	485	490	495
Glu Gly Asn Leu	Pro Leu Leu Ile Ala	Pro Ala Leu Ala Ala Val	500	505	510
Leu Leu Ala Ala	Leu Ala Ala Val Gly	Ala Ala Tyr Cys Val Arg	515	520	525
Arg Gly Arg Ala	Met Ala Ala Ala Ala	Gln Asp Lys Gly Gln Val	530	535	540
Gly Pro Gly Ala	Gly Pro Leu Glu Leu	Glu Gly Val Lys Val Pro	545	550	555
Leu Glu Pro Gly	Pro Lys Ala Thr Glu	Gly Gly Gly Glu Ala Leu	560	565	570
Pro Ser Gly Ser	Glu Cys Glu Val Pro	Leu Met Gly Phe Pro Gly	575	580	585
Pro Gly Leu Gln	Ser Pro Leu His Ala	Lys Pro Tyr Ile	590	595	

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<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

ccctccactg ccccaccgac tg 22

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71
 cggttctggg gacgttaggg ctcg 24

<210> 72
 <211> 25
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 72
 ctgcccacg tccacctgcc tcaat 25

<210> 73
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic oligonucleotide probe

<400> 73
 aggactgcc accgtccacc tgctcaatg ggggcacatg ccacc 45

<210> 74
 <211> 45
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Synthetic Oligonucleotide Probe

<400> 74
 acgcaaagcc ctacatctaa gccagagaga gacagggcag ctggg 45

<210> 75
 <211> 1077
 <212> DNA
 <213> Homo Sapien

<400> 75
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 cgccccgcca cctccttgct accccactct tgaaaccaca gctgttgcca 100
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 ggctccagg caacatgggg ggcccagtc gagagccggc actctcagtt 200
 gccctctggt tgagttgggg ggcagctctg ggggccgtgg cttgtgccat 250
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 cttgcttctg ttcccatgg agctccg 1077

<210> 76
 <211> 250
 <212> PRT
 <213> Homo Sapien

<400> 76
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 Gly Asn Met Gly Gly Pro Val Arg Glu Pro Ala Leu Ser Val Ala
 20 25 30
 Leu Trp Leu Ser Trp Gly Ala Ala Leu Gly Ala Val Ala Cys Ala
 35 40 45
 Met Ala Leu Leu Thr Gln Gln Thr Glu Leu Gln Ser Leu Arg Arg
 50 55 60
 Glu Val Ser Arg Leu Gln Gly Thr Gly Gly Pro Ser Gln Asn Gly
 65 70 75
 Glu Gly Tyr Pro Trp Gln Ser Leu Pro Glu Gln Ser Ser Asp Ala
 80 85 90
 Leu Glu Ala Trp Glu Asn Gly Glu Arg Ser Arg Lys Arg Arg Ala
 95 100 105
 Val Leu Thr Gln Lys Gln Lys Lys Gln His Ser Val Leu His Leu
 110 115 120

Val Pro Ile Asn Ala Thr Ser Lys Asp Asp Ser Asp Val Thr Glu
125 130 135

Val Met Trp Gln Pro Ala Leu Arg Arg Gly Arg Gly Leu Gln Ala
140 145 150

Gln Gly Tyr Gly Val Arg Ile Gln Asp Ala Gly Val Tyr Leu Leu
155 160 165

Tyr Ser Gln Val Leu Phe Gln Asp Val Thr Phe Thr Met Gly Gln
170 175 180

Val Val Ser Arg Glu Gly Gln Gly Arg Gln Glu Thr Leu Phe Arg
185 190 195

Cys Ile Arg Ser Met Pro Ser His Pro Asp Arg Ala Tyr Asn Ser
200 205 210

Cys Tyr Ser Ala Gly Val Phe His Leu His Gln Gly Asp Ile Leu
215 220 225

Ser Val Ile Ile Pro Arg Ala Arg Ala Lys Leu Asn Leu Ser Pro
230 235 240

His Gly Thr Phe Leu Gly Phe Val Lys Leu
245 250

<210> 77
<211> 2849
<212> DNA
<213> Homo Sapien

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 ctccccagc tctttccaga aaacattaaa ctcagaattg tgttttcaa 2849

<210> 78
 <211> 281
 <212> PRT
 <213> Homo Sapien

<400> 78
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 20 25 30
 Gln Gly Glu Gln Gln Glu Trp Glu Gly Thr Glu Glu Leu Pro Ser
 35 40 45
 Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
 50 55 60
 Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
 65 70 75
 Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro
 80 85 90
 Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
 95 100 105
 Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly

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Ala	Arg	Gly	His	Thr	Gly	Pro	Lys	Gly	Gln	Lys	Gly	Ser	Met	Gly			
					125						130						135
Ala	Pro	Gly	Glu	Arg	Cys	Lys	Ser	His	Tyr	Ala	Ala	Phe	Ser	Val			
					140						145						150
Gly	Arg	Lys	Lys	Pro	Met	His	Ser	Asn	His	Tyr	Tyr	Gln	Thr	Val			
					155						160						165
Ile	Phe	Asp	Thr	Glu	Phe	Val	Asn	Leu	Tyr	Asp	His	Phe	Asn	Met			
					170						175						180
Phe	Thr	Gly	Lys	Phe	Tyr	Cys	Tyr	Val	Pro	Gly	Leu	Tyr	Phe	Phe			
					185						190						195
Ser	Leu	Asn	Val	His	Thr	Trp	Asn	Gln	Lys	Glu	Thr	Tyr	Leu	His			
					200						205						210
Ile	Met	Lys	Asn	Glu	Glu	Glu	Val	Val	Ile	Leu	Phe	Ala	Gln	Val			
					215						220						225
Gly	Asp	Arg	Ser	Ile	Met	Gln	Ser	Gln	Ser	Leu	Met	Leu	Glu	Leu			
					230						235						240
Arg	Glu	Gln	Asp	Gln	Val	Trp	Val	Arg	Leu	Tyr	Lys	Gly	Glu	Arg			
					245						250						255
Glu	Asn	Ala	Ile	Phe	Ser	Glu	Glu	Leu	Asp	Thr	Tyr	Ile	Thr	Phe			
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Ser	Gly	Tyr	Leu	Val	Lys	His	Ala	Thr	Glu	Pro							
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<210> 79
<211> 24
<212> DNA
<213> Artificial Sequence
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<211> 45
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic oligonucleotide probe

<400> 81
cccgggtgctt gcgctgctgt gaccccggtg cctccatgta cccgg 45

<210> 82
<211> 2284
<212> DNA
<213> Homo Sapien

<400> 82
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TOP SECRET

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<210> 83
 <211> 431
 <212> PRT
 <213> Homo Sapien

<400> 83
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Gln Tyr Gly Leu Pro Phe Glu Lys Trp Leu Leu Ile Gly Ser Leu		
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gggagaggcc tgcctcaaa gctccagtcc ccaaaaggca aaaatgtgac 200
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aggcgataac tctggaccga tgacaaagtt tattcagagt gctgctccaa 450
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 Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val
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 Gly Pro Met Thr Lys Phe Ile Gln Ser Ala Ala Pro Lys Ser Leu
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Asn Met Lys Phe Arg Ser Ser Trp Val Phe Ile Ala Ala Lys Gly
185 190 195

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aggcttgga ctccttc 18

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aagattcttg agcgattcca gctg 24

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<400> 98
catccaggct cgccactg 18

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